

**What is claimed is:**

1. A communication terminal that communicates with a plural number of other communication terminals in a network, comprising:

5 a data transmitting unit operable to transmit data to a first communication terminal;

a history information memorizing unit operable to memorize, per data for transmission, information which includes information specifying the first communication terminal as propagation history  
10 information that shows a propagation route of the concerned data;

a propagation information receiving unit operable to receive, from the first communication terminal, propagation information that shows that data for transmission is transmitted from the first  
15 communication terminal to a second communication terminal; and

a history information updating unit operable to add the received propagation information to corresponding propagation history information memorized in the history information memorizing unit.

20 2. The communication terminal according to Claim 1, further comprising:

a data receiving unit operable to receive data from a third communication terminal;

25 an additionally memorizing unit operable to additionally memorize information, which includes information specifying the third communication terminal, in the history information memorizing unit per data for receipt, as propagation history information that shows a propagation route of the concerned  
30 data;

a second history information updating unit operable to update, when data for receipt is transmitted to a fourth

communication terminal from the concerned communication terminal, the propagation history information, which is additionally memorized in the history information memorizing unit, by using information specifying the fourth communication terminal; and

a propagation information transmitting unit operable to transmit propagation information, which shows the said data is transmitted to the forth communication terminal, to the third communication terminal.

3. The communication terminal according to Claim 2, further comprising:

a numerical value accepting unit operable to accept a numerical value from a user; and

a generation number restricting unit operable to restrict the number of generations of the propagation route in the history information memorizing unit based on the accepted numerical value.

4. The communication terminal according to Claim 2, further comprising:

a transmission determining unit operable to determine whether the propagation information, which shows the said data is transmitted to the fourth communication terminal, is correctly transmitted to the third communication terminal or not; and

a retransmitting unit operable to try the transmission of the propagation information to the third communication terminal again when the propagation information is determined not to be correctly transmitted.

5. The communication terminal according to Claim 4, further comprising:

a terminal specifying unit operable to specify a communication terminal which has received the data before said third communication terminal receives said data when the propagation information is determined not to be correctly  
5 transmitted to the third communication terminal; and

a second propagation information transmitting unit operable to transmit the propagation information, which shows the said data is transmitted to the fourth communication terminal, to the specified communication terminal.

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6. The communication terminal according to Claim 2, further comprising:

an authenticating unit operable to authenticate the data, which is received from the third communication terminal, and the  
15 third communication terminal,

wherein the additionally memorizing unit execute the additional memorization only when the said data and the third communication terminal are authenticated.

20 7. A communication terminal that communicates with a plural number of other communication terminals in a network, comprising:

a data receiving unit operable to receive data from a first communication terminal;

25 a history information memorizing unit operable to memorize information, which includes information specifying the first communication terminal, per data for receipt, as propagation history information that shows a propagation route of the concerned data;

30 a history information updating unit operable to update, when data for receipt is transmitted to a second communication terminal from the concerned communication terminal, the

propagation history information, which is memorized in the history information memorizing unit, by using information specifying the second communication terminal; and

5 a propagation information transmitting unit operable to transmit propagation information, which shows data for transmission is transmitted to the second communication terminal, to the first communication terminal.

10 8. A communication system comprising at least three communication terminals connected to a network,

wherein a first communication terminal includes:

a first data transmitting unit operable to transmit data to a second communication terminal;

15 a first history information memorizing unit operable to memorize information, which includes information specifying the second communication terminal, per data for transmission, as propagation history information that shows a propagation route of the concerned data;

20 a first propagation information receiving unit operable to receive propagation information that shows data for transmission is transmitted from the second communication terminal to a third communication terminal; and

25 a first history information updating unit operable to add the received propagation information to the propagation history information memorized in the first history information memorizing unit,

the second communication terminal includes:

a second data receiving unit operable to receive data from the first communication terminal;

30 a second history information memorizing unit operable to memorize information, which includes information specifying the first communication terminal per data for receipt, as propagation

history information that shows a propagation route of the concerned data;

5 a second history information updating unit operable to update, when data for receipt is transmitted to the third communication terminal from the concerned communication terminal, the propagation history information, which is memorized in the second history information memorizing unit, by using information specifying the third communication terminal; and

10 a second propagation information transmitting unit operable to transmit propagation information, which shows data for transmission is transmitted to the third communication terminal, to the first communication terminal.

9. A communication method for communicating with a plural  
15 number of other communication terminals in a network, comprising:

a data transmitting step of transmitting data to a first communication terminal;

20 a history information memorizing step of memorizing information, which includes information specifying the first communication terminal in a specific memorizing unit, per data for transmission, as propagation history information that shows a propagation route of the concerned data;

25 a propagation information receiving step of receiving, from the first communication terminal, propagation information that shows data for transmission is transmitted from the first communication terminal to a second communication terminal; and

30 a history information updating step of adding the received propagation information to corresponding propagation history information memorized in the memorizing unit.

10. The communication method according to Claim 9, further

including:

a data receiving step of receiving data from a third communication terminal;

an additionally memorizing step of additionally memorizing  
5 information, which includes information specifying the third communication terminal, in the memorizing unit per data for receipt, as propagation history information that shows a propagation route of the concerned data;

a second history information updating step of updating,  
10 when data for receipt is transmitted to a fourth communication terminal from the concerned communication terminal, the propagation history information, which is additionally memorized by the additionally memorizing step, by using information specifying the fourth communication terminal; and

15 a propagation information transmitting step of transmitting propagation information, which shows the said data is transmitted to the forth communication terminal, to the third communication terminal.

20 11. A communication method for communicating with a plural number of other communication terminals in a network, comprising:

a data receiving step of receiving data from a first communication terminal;

25 a history information memorizing step of memorizing information, which includes information specifying the first communication terminal, in a specific memorizing unit per data for receipt, as propagation history information that shows a propagation route of the concerned data;

30 a history information updating step of updating, when data for receipt is transmitted to a second communication terminal from the concerned communication terminal, the propagation

history information, which is memorized in the memorizing unit, by using information specifying the second communication terminal; and

5 a propagation information transmitting step of transmitting propagation information, which shows data for transmission is transmitted to the second communication terminal, to the first communication terminal.

12. A program for a communication terminal that  
10 communicates with a plural number of other communication terminals in a network, comprising:

a data transmitting step of transmitting data to a first communication terminal;

15 a history information memorizing step of memorizing information, which includes information specifying the first communication terminal, in a specific memorizing unit per data for transmission, as propagation history information that shows a propagation route of the concerned data;

20 a propagation information receiving step of receiving, from the first communication terminal, propagation information that shows data for transmission is transmitted from the first communication terminal to a second communication terminal; and

25 a history information updating step of adding the received propagation information to corresponding propagation history information memorized in the memorizing unit.

13. The program according to Claim 12, further comprising:

a data receiving step of receiving data from a third communication terminal;

30 an additionally memorizing step of additionally memorizing information, which includes information specifying the third communication terminal, in the memorizing unit per data for

receipt, as propagation history information that shows a propagation route of the concerned data;

a second history information updating step of updating, when data for receipt is transmitted to a fourth communication terminal from the concerned communication terminal, the propagation history information, which is additionally memorized in the additionally memorizing unit, by using information specifying the fourth communication terminal; and

a propagation information transmitting step of transmitting propagation information, which shows the said data is transmitted to the forth communication terminal, to the third communication terminal.

14. A program for a communication terminal that communicates with a plural number of other communication terminals in a network, comprising:

a data receiving step of receiving data from a first communication terminal;

a history information memorizing step of memorizing information, which includes information specifying the first communication terminal, in a specific memorizing unit per data for receipt, as propagation history information that shows a propagation route of the concerned data;

a history information updating step of updating, when data for receipt is transmitted to a second communication terminal from the concerned communication terminal, the propagation history information, which is memorized in the memorizing unit, by using information specifying the second communication terminal; and

a propagation information transmitting step of transmitting propagation information, which shows data for transmission is transmitted to the second communication terminal, to the first



communication terminal.